A REPORT

UPON THE

Public Health of the Borough of Great Yarmouth,

FOR THE YEAR 1885,

COMPRISING SOME PARTICULARS OF

ITS POPULATION, VITAL STATISTICS, CAUSES
OF DEATH & LOCALITIES OF ZYMOTICS;

TOGETHER WITH

The Numbers and Characters of the various Nuisances
abated, and a short account of the more

IMPORTANT SANITARY MATTERS

DEALT WITH BY THE U.S.A., BY

JOHN BATELY, L.R.C.P., Lond., &c.,

Medical Officer of Health and Medical Superintendent of the
Urban Sanitary Authority's Infectious Diseases Hospital.

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REPORT.

TO THE GREAT YARMOUTH URBAN SANITARY AUTHORITY.

Gentlemen,

The following is my report upon the health of the Borough for the year 1885.

It embraces the fifty-three weeks ending with Saturday, January 2nd, 1886, and it is satisfactory to note that although I thus extend the year, the death rate was lower than usual.

I estimate the Population, on the 30th of last June, to have numbered 48,081 persons, and by the end of the year they had probably increased to 48,300.

There were registered within the borough during the period mentioned in the second paragraph

1,600 Births and 915 Deaths.

These figures applied to the estimated population for the middle of last year give the following results :—

33·27 per 1,000 as the Birth Rate.
19·03 ,, ,, Death Rate.

Amongst the births are eighty-five illegitimates and amongst the deaths twenty-eight such under one year of age. These facts indicate a death rate of 32·9 per cent. before they were a twelvemonth old. How many ultimately attain to maturity is very difficult to tell.

Evidently some very powerful causes are operating against the lives of these children, and these causes ought to be removed, or certainly very much ameliorated, for the death rate of babes of corresponding age, but of more happy parentage, was last year in this borough 12·8 per cent. The illegitimate has the worst of it by 20 per cent.

This social question is one of extreme national importance and ought to have the serious attention of the Government.

The parents of illegitimate children are not usually, in this town at least, persons of feeble constitution, rather they are young and robust; and these very persons when they marry, as those of the working classes frequently do, experience no difficulty in rearing large healthy families. Young persons with health and vigour in their favour, surely ought to produce more permanent offspring than those already exhausted with much childbearing, hard work, and advancing years; but the statistics I am calling your attention to tend to the opposite conclusion. I am not aware that consitutional taint is more conspicuous in the one class than in the other, yet from some cause or other illegitimate infants are hurried out of the world at an alarming rate.

The moral circumstances with which the advent of these babes are clouded make their presence very disagreeable for parents and friends, and the termination of their existence a consummation much desired. Herein I believe lies the secret of their mortality. Surely the nurture of these helpless innocents is worth an equal solicitude to that wherewith the law looks after their registration and vaccination.

A very simple arrangement suggests itself to my mind, which, if adopted, might do a great deal to stem this terrible tide. I would have the residence of the nurse of every such infant made known to the Medical Officer of Health for the district in which the babe lives, so that he could as often as he pleases, pay surprise visits to see how the child thrives, and judge of the parental attention given it. The death of every such child should be notified to him before registration, and an inquest held upon all who he may have reason to believe have not had the best motherly and medical care the circumstances of the case would allow.

I have referred to this illegitimate death rate in several of my former reports, and I sincerely trust what I have said in those and this report will attract official attention and have good results.

More than one third of the total number of deaths were those of children under five years.

Deaths from ZYMOTIC causes were not quite so numerous last year as the year before, but they numbered 110, and produced a zymotic death rate of 2·28 per 1,000.

The following figures indicate the state of the public health of this borough, in each of the several years mentioned, and are of considerable interest. Inserted beneath my own figures, and in smaller type, are those of the Registrar General, which by the courtesy of Dr. Ogle, I am enabled to give as far back as 1870. Please bear in mind my figures refer to the borough only, but in the Registrar General's calculations the parishes of Bradwell, Belton, Burgh Castle, Fritton, and Hopton are included, hence his larger number of births and deaths. The salubrity of the rural district as compared with the town, makes the difference in the death rate. In reality we are not quite so healthy as might be inferred from the Registrar General's figures.

	Number of Births.	Birth Rate per 1,000.	Number of Deaths.	Death Rate per 1,000.	Number of Zymotic Deaths.	Zymotic Death Rate: per 1,000.
1885	1600	33·27	915	19·03	110	2·28
„	1632	32·27	901	17·85	—	1·98
1884	1683	35·30	1017	21·34	158	3·31
„	1761	35·2	1034	20·7	—	3·0
1883	1564	33·13	904	19·17	66	1·42
„	1617	32·6	921	18·6	—	1·2
1882	1525	32·45	953	20·28	134	2·85
„	1616	32·9	973	19·8	—	2·6
1881	1580	34·18	889	19·23	114	2·46
„	1668	34·3	904	18·6	—	2·4
1880	1561	31·53	959	19·37	173	3·49
„	1661	32·2	975	18 9	—	3·6
1879	1568	32·32	830	17·11	79	1·60
„	1631	32·3	849	16·8	—	1·6
1878	1553	32·69	1057	22·25	147	3·07
„	1599	32·2	1071	21·0	—	3·0
1877	1490	31·93	900	19·29	109	2·3
„	1571	32·2	913	18·7	—	2·4
1876	1490	32·53	920	20·01	155	3·3
„	1558	32·4	936	19·5	—	3·3
1875	1434	31·8	1036	23·02	201	4·6
„	1514	32·1	1041	22·1	—	4·4
1874	1420	30·7	1032	22·3	—	6 4
1873	1449	31·9	1026	22·6	—	3·8
1872	1494	33·4	1015	22·7	—	5·2
1871	1446	32·9	1002	22·8	—	5·1
1870	1527	37·3	925	22·6	—	—

The most noteworthy fact the foregoing table brings to light, is the considerable reduction the death rate has undergone during the last ten years.

My own records show the death rate as 23 per 1,000 in 1875, and something less each year ever since.

The table on pages 8 and 9 is in accordance with the Local Government Board's directions, and exhibits many particulars of the mortality of your sanitary district during 1885. I have supplemented it by giving the totals of like particulars for several years past, so that comparison of the various years may be made.

The localities in which zymotic deaths occurred last year were as under :—

Those from Measles—

North Denes
Northampton Place
Row 51
Harbour Terrace
Fuller's Hill
King Street

Those from Scarlet Fever—

Audley Street (2)
Row 71
Cobb's Place
Nelson Place
King Street (2)
Row 132
Upper Cliff Road

Those from Diphtheria—

Cobholm Island
Cobholm Terrace
Norman Square
Nelson Road, Gorleston
Row 89
Row 87
Row 134
Bath Place, Gorleston

Those from Whooping Cough—

Market Road Place
Row 54
Blackfriars' Road (2)

Those from Typhoid—

Barrow's Walk
Red Lion Alley
Row 15
Fulcher's Buildings
Tottenham Street (2)
South Market Road
St. Nicholas' Road
Manby Road
George Street
Row 52
Row 139
Napoleon Place (2)
Row 3
Infectious Diseases Hospital
Gedge's Buildings
West Bermondsey Place
Audley Street
Well Street
Bessey's Buildings
Row 76
South Howard Street
Garden Cottages
Queen's Road
Middlegate Street (2)

TABLE OF

During the year 1885, in the Urban Sanitary District of Great
LOCALITIES, and showing also the Population of

Names of Localities adopted for the purpose of these Statistics. 1.	Population of all Ages. Census 1881. 2.	Population of all Ages. Estimated to middle of 1885. 3.	Registered Births. 4.	Mortality from all causes, at subjoined ages. At all ages. 5.	Under 1 year. 6.	1 and under 5. 7.	5 and under 15. 8.	15 and under 25. 9.	25 and under 60. 10.	60 and upwards. 11.
North District ...	20,612	21,017	668	447	108	41	17	23	108	150
South District ...	16,601	17,066	559	310	74	40	11	17	88	80
Gorleston and Southtown ...	9,001	9,998	373	158	40	21	11	6	37	43
Totals ...	46,214	48,081	1,600	915	222	102	39	46	233	273
1884—Estimated to middle of year		47,640	1,683	1017	301	133	43	43	233	264
1883 ,, ,, ...		47,202	1,564	904	232	86	35	41	206	304
1882 ., ,, ..		46,762	1,525	953	267	143	37	40	199	267
1881—Per Census		46,214	1,580	889	245	108	30	37	219	250
1880—Corrected Estimate ...		45,775	1,561	959	293	121	40	31	209	265
1879 ,, ,, ...		45,335	1,568	830	213	89	45	32	213	238
1878 ,, ,, ...		44,896	1,553	1057	305	137	27	35	243	310

DEATHS.

Yarmouth, classified according to **DISEASES, AGE**, and such Localities, and the Births therein during the year.

Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of age.

							Cond. Fevers.															
	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not "spasmodic")	Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Doubtful.	Diarrhœa and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia & Pleurisy.	Heart Disease.	Injuries.	All other Dsieases.
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32	33.
Under 5.	—	4	4	2	1	3	—	0	0	12	—	0	1	—	—	—	1	20	2	2	162
5 upwds.	—	0	1	1	1	0	—	18	2	1	—	1	3	—	—	—	30	37	25	16	97
Under 5.	—	1	3	3	4	2	—	1	—	16	—	0	1	0	0	—	1	25	0	3	54
5 upwds.	—	0	0	0	2	0	—	18	—	3	—	1	2	1	1	—	31	30	22	4	81
Under 5.	—	1	1	2	1	—	—	1	—	4	—	—	0	—	—	—	0	5	0	1	43
5 upwds.	—	0	0	0	3	—	—	6	—	0	—	—	1	—	—	—	11	16	9	2	51
Under 5.	—	6	8	7	6	5	—	2	0	32	—	0	2	0	0	—	2	50	2	6	259
5 upwds.	—	0	1	1	6	0	—	42	2	4	—	2	6	1	1	—	72	83	56	22	229
Under 5.	0	31	0	10	17	19	—	0	0	62	4	0	3	—	0	—	3	66	0	1	221
5 upwds.	1	3	1	4	6	0	—	18	1	2	2	5	4	—	2	—	68	70	69	24	300
Under 5.	—	—	1	3	21	9	—	1	1	35	—	—	1	—	—	—	2	45	0	3	197
5 upwds.	—	—	2	2	7	0	—	6	0	6	—	—	2	—	—	—	67	74	51	31	337
Under 5.	—	17	6	0	4	16	—	1	—	78	—	1	0	—	0	—	5	83	0	1	198
5 upwds.	—	1	1	1	2	0	—	8	—	5	—	2	11	—	4	—	57	56	59	28	308
Under 5.	1	16	15	2	3	4	—	2	1	46	—	0	0	2	0	—	0	65	0	3	194
5 upwds.	5	1	6	2	2	1	—	7	1	4	—	1	9	3	9	—	59	69	46	32	278
Under 5.	—	3	30	3	11	14	—	1	0	89	—	0	1	—	0	—	6	58	1	5	197
5 upwds.	—	1	11	5	2	0	—	6	1	9	—	4	1	—	2	—	66	70	47	34	281
Under 5.	—	7	9	3	6	6	—	2	0	26	—	0	2	0	0	—	2	55	0	5	181
5 upwds.	—	0	8	4	1	0	—	4	4	6	—	2	2	1	1	—	73	43	48	31	298
Under 5.	—	18	9	2	8	25	—	2	3	66	1	0	2	0	—	—	12	74	0	7	213
5 upwds.	—	3	1	1	2	0	—	9	2	4	0	8	3	2	—	—	87	83	58	19	333

King Street (2)
Tower Street
St. James' Walk
St. George's Row, east
Cliff Hill, Gorleston (2)
Trafalgar Road, Gorleston
Telegraph Cottages
Tower Road (2)
Shakespeare Terrace
Cremorne Place
St. James' Place
Priory Street, Gorleston (2)
Southtown Barracks

Those from Diarrhœa—

Paget Road
Foundry Walk
Row 8
Row 29
North Market Road (2)
Victoria Street
Cobholm Terrace
Row 13
Nursery Terrace (2)
The Conge
Row 61
Row 128
Row 142
Mill Lane, Southtown
Bessey & Palmer's shipyard
St. Mary's Marsh, Southtown
Woodford Terrace, Southtown
Row 113
Dene Side
Nelson Road (south)
Old Lifeboat Yard
Victoria Road
St. George's Row, east (2)
Row 97
Clarence Road
Row 92
Middlegate Street
Admiralty Road
Rodney Road
Adam and Eve Garden
Row 140
Royal Naval Asylum
Exmouth Road

SANITARY WORK.

NUISANCE REMOVAL.

Total number attended to by Inspector	895
Remedied by Inspector's notice only	375
Referred to the Town Clerk to take proceedings ...	520
(*a.*) To concrete, or otherwise repair back yards, passages, &c.	122
(*b.*) To construct new drains, to repair and cleanse old ones, and to trap and cleanse cesspools	177

(*c.*)	To reconstruct and otherwise repair privies	80
(*d.*)	To close impure water wells	70
(*e.*)	To cleanse, repair, or construct w.c's. ...	33
(*f.*)	To put up water troughing	22
(*g.*)	To remove manure, discontinue keeping pigs, &c.	19
(*h.*)	To whitewash and purify dwellings, cellars, &c.	19
(*i.*)	To provide water supply	14
(*j.*)	To close unwholesome dwellings, purify, and concrete underfloor spaces, cover manure bins, repair cellar flaps, &c. ...	24

The vast improvement you have recently effected in the rows, by laying along them a centre walk of concrete paving, requires to be supplemented with the complete renovation of their side gutters. In many of the rows the surface channels are so defective that the liquid filth escapes through their broken sides into the soil beneath and the foundations of houses near by. A concrete basis should underlie the new gutters, and a cement plaistering of adjoining walls should be rendered so as to thoroughly protect soil and building from contamination.

Some improvement might also be effected in the terribly large and offensive gullies now to be found at the ends of the rows.

A scheme for flushing the sewers and watering the roads with sea water, has had your earnest consideration during the past year, and I am glad to chronicle the work is now in the hands of the contractor who is busily engaged upon it. The Surveyor hopes to have the whole scheme completed before the visiting season commences.

'Tis curious how few towns on the sea coast have thought it worth their while to utilize the sea water for sanitary purposes. Yet a fair and honest consideration of the relative values of fresh water or sea water for the purposes indicated, must, I think, end in favour of the latter. The truth appears to be that inasmuch as many coast towns have provided themselves, or had provided for them by private companies, general schemes of water supply for drinking and domestic purposes, they have taken from such source all the water they needed, for sanitary purposes as well, and have not yet had reason to consider the question as you have done. It so happens in Yarmouth our main sewers are very long, and many of them very nearly horizontal. They have now recently been thoroughly overhauled and cleansed, and many of them relaid. They have also had numerous man holes, inspection holes, and ventilation apertures, opened into them. By all these exits a great deal of sewer gas escapes which aforetime found its way up private connections into dwelling houses. Although a considerable number of cases of sickness here and there all about the town have undoubtedly been prevented by relieving the dwellings of sewer gas contamination, still the public in the streets have been highly offended at the exhalations from the sewers, a stench which, by the way, they had for years more or less tolerated inside their own dwellings and very probably suffered in consequence of. The most effectual remedy, of course, could only be the transmission of the sewage as quickly as possible through the sewers to the river, so as to prevent its stagnation and consequent putrifaction. To effect this copious flushing commencing at the head of every sewer is of the first importance.

The necessity for complete flushing I pointed out in my last year's report, and it was in adopting the advice I there tendered you, the questions of quantity and cost of the water supplied to you by the water company came to the surface.

Naturally sea water as the more economical, suggested itself, and during last summer you made trial of it for watering many of the principal thoroughfares.* For this purpose it did exceedingly well, and I am sure it will answer equally as well for flushing the sewers. If salt water could have damaged our sewers that would have been discovered years ago, for

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* " This year's work shows that sea water, waters the streets much more effectually than fresh water. I am within the mark in saying that one load of salt water lays the dust better than two loads of fresh water. Those roads which have been watered with salt water, have kept together and been in a better state than those watered with fresh water, and if adopted throughout the town, I am certain that a large saving in horse hire and patching gravel will result; no estimate can be given, but I believe it will not be less than £200 per annum.

About 25,000,000 gallons per annum will be available for flushing, if the scheme I propose is adopted. This I consider worth the whole cost. The estimates allow for automatic flushing tanks of 1,500 gallons capacity being put under the Admiralty road, Clarence road, Albert square, east end of Russell road, west end of Market gates for Market sewer, and east end of Euston road ; and provision is made for connecting the six existing tanks with the new supply.

The pressure I propose to give is nearly as great as that of the Water Works Company, so that in case of a serious fire, or the Corporation hydrant being nearer than those of the Water Works Company, a good supply would be obtainable.

I would recommend that the central part of the town be watered by hose as in Paris and Brussels, which I estimate would save about £80 per annum in horse hire.

As it will take less water to water the roads, a saving will be made in the cost of carting, which would be certainly not less than £30 per annum.

For the seven years 1877 to 1883 both inclusive, the average cost of the water obtained from the Company was £404 6s. 7d., allowing only £15 per annum for washout and hydrant repairs, while some of the accounts reached £45.

Last year the water cost £552 0s. 6d., for which rather more than 10,000,000 gallons were obtained.

The plans which I have prepared, and submit herewith, provide plant for raising 250,000 gallons per day, which will give 30,000,000 gallons for 120 days' works (the usual number of days in which watering and flushing are required to be done). The heaviest days work of which I have particulars is about 160,000 gallons.

The cost of this scheme will be £4,500.

	£	s.	d.
The interest and repayment of which will cost per annum	270	0	0
Working expenses and repairs	110	0	0
Small additions per annum	30	0	0
Total cost per annum equal to 3¼ per 1000 gallons ..	£410	0	0

J. W. Cockrill, Borough Surveyor, 23rd July, 1886."

ever since the sewers have been constructed, they have yearly received many tons of salt washed from the fish in the herring curing houses.

After mature consideration you determined upon utilizing the sea water for Sanitary purposes, and have contracted for the erection of a gas engine near the jetty on the beach, and by this means sea water will be pumped to an elevated reservoir, from which mains will be laid to stand pipes for street watering, and to tanks for sewer flushing, situate in every part of the town, Already the fact that sea water will be flowing past their doors has suggested to some persons the desirability of having it laid on to their private baths. But there is another purpose to which it might be put second to none of the foregoing in sanitary importance. I refer to the substitution of a cheap and simple form of water closet, flushed with sea water in lieu of the offensive privies which now render unwholesome so many of the humblier dwellings throughout the borough. You are now paying a large sum annually for the carting away of the ordure from the prvies; I do not think it would cost you so much to wash it away, and you would be doing something towards flushing your drains at the same time.

Of course the water Company would in their own interest, most strenuously resist such an infringement of their patent as suggested in the preceding paragraph, but probably the day is not far off (for you are now considering the matter) when you will be able to acquire the whole concern and privileges now belonging to the water company, and will by means of their mains supply the public with the best drinking water you can possibly obtain for them, and not unduly tax such supply for w.c's. in order to make a paying investment. Providing the public with the essentials of good health is the best possible investment you can make on their behalf.

In speaking of the water company I am naturally reminded of the action you took last May in order to ascertain the purity of the water supplied by them. During the last ten or eleven years you have caused a great many unwholesome wells in this town to be closed, and it was thought highly proper that the best possible opinion should be obtained as to the quality of the water your action compelled the inhabitants to drink of.

The following is a copy of the certificate received :—

Report of the analysis of two samples of water received the 15th day of May, with the seals unbroken, from the Inspector of Nuisances, Great Yarmouth.

	Sample labelled Albert square.	Sample labelled Market place.
Appearance of the water when examined in a two feet tube	Slightly turbid and of a pale yellow colour.	Slightly turbid and of a pale yellow colour.

All results in grains per gallon

Smell when heated at 100° Fahrenheit ...	none	none
Ammonia (free and saline)	·0006	·0006
Albuminoid Ammonia	·0089	·0094
Organic Carbon	·463	·443
Organic Nitrogen	·041	·041
Oxygen required to oxodise the organic matter (15 minutes)	·0700	·0613
Oxygen required to oxodise the organic matter (4 hours)	·2049	·1792
Nitrogen as Nitrates	·0484	·0288
Lime	6·52	6·10
Magnesia	1·18	·96
Sulphuric Anhydride	3·16	2·83
Chlorine	4·00	3·90
Hardness	11·64	10·92
,, after boiling 15 minutes ...	2·62	2·50
Phosphoric Acid	trace	trace

Remarks upon the Analysis and upon the general qualities of the Samples of Water.

Both samples were slightly turbid, and deposited on standing a scanty sediment, this was examined by the microscope, but no animalculœ or definite life forms were detected.

It is my custom now to "cultivate" each water ; that is a drop or two is mixed with perfectly pure sterile nutrient gelatin, and then on being put under suitable conditions minute seeds or gerns, otherwise quite invisible, are made to develope and their number and nature are estimated.

Albert Square Water.

In five days in one gramme there were innumerable centres of micrococci and 50 largish growths of common mould.

Market Place Water.

After three day's cultivation one gramme of the water had developed 584 centres of growth ; two of the growths were centres containing groups of bacilli which in a couple of days liquified the gelatin ; the others were clusters of micrococci.

The chemical analysis, the physical and microscopical characters of waters combined with the results of the biological examination just detailed, enable me to give an accurate judgment as to the quality of the water.

The amount of oxygen consumed, the ratios of carbon to nitrogen and albuminoid ammonia are all different, and in excess of the quantities found in the very first-class of drinking waters. More centres are also developed under cultivation than in first-class waters.

The composition and quality of the water taken from Albert square is practically the same as that taken from Market place.

The water could by efficient filtration be made a first-class water ; but in its present state I must return it as one of the second class, that is one of doubtful purity.

A. WYNTER BLYTH.

Court House, St. Marylebone, W.,
May 28th, 1885.

Having regard to the last paragraph in the analyst's report I would suggest that you cause the water to be again analysed during next summer, and indeed every summer.

The following are copies of certificates of some of the analyses of water from some of our Yarmouth wells, made during the past year. All of them, and many more, you have condemned, and the Company's water ordered in lieu thereof.

If Mr. Blyth's estimate of the Company's water as "second class water" be accepted as a standard, the waters hereunder described must be very near poison. Certainly fever and other illnesses were rife in the houses supplied by many of those wells, and 'tis more than probable the water had something to do with those sicknesses.

Locality from whence the waters were taken.	Ammonia:		Chlorine.	Nitrogen as Nitrates.
	Free.	Organic.		
		Grains per 100,000.		
Howard Street, south ...	0·020	0·010	26·8	7·0
Cliff Hill, Gorleston ...	0·025	0·015	16·0	6·1
Audley Street	0·015	0·020	21·8	1·5
Nelson Place, St. Nicholas' Road	0·012	0·014	31·6	3·4
Bethsheba Place, Havelock Road	0·050	0·020	10·0	3·2
Wells Street	0·045	0·020	12·4	3·2
Troy Alley	0·014	0·020	48·0	4·6
Row 117	0·010	0·014	43·2	5·2
Row 3	0·010	0·012	31·6	5·4
Harrison's Buildings, St. George's Road	0·030	0·015	36·0	3·7
Row 57	0·002	0·012	33·6	10·3
St. Peter's Road	0·006	0·012	40·0	4·8
Row 118	0·004	0·010	36·0	6·7
Blackwall Reach, Gorleston ...	0·003	0·010	11·0	2·8

◆

By the "Redistribution of Seats Act" of last year, the boundary of this borough is very much enlarged for the purpose of Parliamentary representation, and the area so snapped out consists of the "Municipal Borough of Great Yarmouth, including the whole of the Parish of Gorleston, and so much of the parish of Runham in the county of Norfolk as included in the following boundary, that is to say, from the point where the north boundary of the parish of Gorleston crosses the centre of new road in a straight line north easterly to the boundary of the parish of Acle, touching the north west corner of the manure works, thence eastward along the boundary of the parish of Acle until it reaches the present boundary of the

Municipal Borough." In other words it embraces Southtown-in-Norfolk and Runham Vauxhall.

I mention this in order to suggest that in re-arranging the area of local authorities which promised legislation is pledged now soon to do, you may seriously consider whether it is not desirable, for the welfare of the public health of this borough, your sanitary jurisdiction should at least be co-terminous with the parliamentary boundary.

Vauxhall is much in need of sanitation, and is described by Dr. Airy in his "Report to the Local Government Board on the sanitary condition of Yarmouth in Norfolk" as follows : "Just as Yarmouth has spread to the south-west into Suffolk, so it has spread to the north-west by a bridge over the Bure, and a large population, essentially belonging to Yarmouth, is springing up on a flat point of alluvial land between the mouth of the Bure and northern margin of Breydon water. The southern part of this region, containing the Vauxhall terminus of the Norwich and Yarmouth Railway, belongs to Southtown in Suffolk, and its sanitary authority is the Board of Guardians of the Mutford and Lothingland Incorporation ; the northern part containing factories and crowded dwellings without proper water supply, is an outlier of the parish of Runham in the East and West Flegg Incorporation, under the sanitary authority of the Board of Guardians of that union. Both parts are almost beyond the reach of their respective authorities ; and the Borough of Great Yarmouth, which has the chief interest in their well-being, has no authority at all on that side of the Bure." Further on in the report Dr. Airy shows pretty clearly that we were indebted to Vauxhall for an epidemic of scarlet fever which commenced in Yarmouth late in 1873 and lasted until the begining of 1875, destroying within the borough 243 lives, "and greviously injured the vitality of hundreds who survived the immediate force of the disease."

Since Dr. Airy wrote this, now more then ten years ago, very little in the way of sanitary improvement has been done in Vauxhall, and I strongly advise that, as soon as possible, that district be incorporated with this borough for every purpose.

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The enactments and regulations in force in this borough relating to the milk trade, are very much ignored. Indeed to keep the dairymen and dealers up to anything like the careful cleanliness you direct, all one person's time is needed. Many small shopkeers make daily purchases of a few gallons of milk from farmers and others, and retail it in small quantities over their counters. The small shops to which I allude, are not devoted to the sale of milk only, but to a heterogenous assortment of vegetables, groceries, &c., &c. To hinder such small traders any opportunity of gaining a livelihood is hardly justifiable, and in this matter would lead to illicit practices, but at the same time the safety of the public health must be secured. To do this a conditional leave is given to such milk vendors, that they receive their wholesale supply from the farmer or dairyman in a proper milk churn, whose lid is properly secured and locked, and never once opened while in the milk retailer's shop. The milk thus protected is drawn off, by a brass tap placed near the base of the churn, in small quantities as asked for. Your regulations as to cleansing milk churns, measures, and other utensils apply with equal force to all parties engaged in the milk trade. Notwithstanding the facilities thus accorded to small tradesmen for selling milk, I find the reasonable conditions of their license, by some, completely disregarded.

Milk so easily becomes contaminated and positively prejudical to health, and the traffic with it has of late years grown so enormously, that I think the time is not far off when some special enactment will be considered necessary making the health of the cows, their feeding, housing and milking: the conveyance, storage, and distribution of the milk, and the cleanliness of all persons, places, and utensils in connection with the milk trade, the peculiar care of the Sanitary Authority for the district in which the milk is consumed and who has therefore the greatest interest in its wholesomeness.

In conclusion I have again to thank you for another year's confidence and kind consideration of all suggestions and advice I have had the honour of tendering you.

I am,
Your obedient Servant,

JOHN BATELY,

Medical Officer of Health.